Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

## Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

## **Listing of the Claims:**

1. (Currently

Amended) A surfactant composition comprising

- (A) 1 to 90 wt%, referring to the total amount of components (A) and(B), of one or more gemini surfactant(s) and,
- (B) referring to the remainder, based on the total of components (A) and (B), at least one additional detergent component with poor initial foaming characteristics, selected from the group consisting of acyllactylates, acylated protein condensates, acylglutamates, and mixtures thereof.
- 2. (Previously
  - Presented) The surfactant composition of Claim 1, characterized in that the surfactant composition comprises 20 to 60 wt%, referring to the components (A) and (B), of one or more gemini surfactant(s).
- 3. (Original) A surfactant composition according to any one of claims 1 or 2, further comprising
  - (C) at least 0.1 wt% water, referring to the total composition.
- 4. (Original) A surfactant composition according to any of claims 1 or 2, further comprising:
  - (D) at least 0.1 wt% of one or more oil component(s), referring to the total composition.
- 5. (Cancelled)
- 6. (Cancelled)

Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

## 7. (Cancelled)

- 8. (Original) A surfactant composition according to any of claims 1 or 2, characterized in that the surfactant composition comprises, as a detergent component, sodium-, potassium-, magnesium-, or calcium salts at the hydroxyl group of linear or branched, saturated or non-adjacently mono- to triunsaturated, cyclic or acyclic carboxylic acids with C<sub>6</sub> to C<sub>24</sub> esterified monomeric lactic acid, or the oligomers thereof, the oligomerization degree of the lactic acid being in the range of from 1.1 to 10.
- 9. (Original) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant comprises at least one nitrogen atom at the link between spacer, hydrophilic group, and hydrophobic group.
- 10. (Original) A surfactant composition according to claim 9, characterized in that the gemini surfactant or the blend thereof comprises an amine- or amidegroup containing spacer with 1 to 12 carbon atoms.
- 11. (Original) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant comprises a hydrophobic double group with a C<sub>6</sub> to C<sub>24</sub>-hydrocarbon residue each.
- 12. (Original) A surfactant composition according to any of claims 1 or 2, characterized in that the surfactant composition comprises 1 to 30 wt% of component (A), referring to the total amount of ionic surfactants that are not gemini surfactants in conformity with component (A).

Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

13. (Original) A surfactant composition according to any of claims 1 or 2, characterized in that the components (A) and (B) are present in the whole composition in a total amount of from 0.1 to 40 wt%.

14. (Original) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant has the general formula (A.1)

$$O \longrightarrow N \longrightarrow R^2 \longrightarrow N \longrightarrow O$$
(A.I),

wherein the substituents have the following meanings:

R<sup>1</sup>, R<sup>3</sup> C<sub>5</sub>- to C<sub>25</sub>-alkyl group that can be branched, unbranched, saturated or unsaturated as far as not adjacently diunsaturated;

 $R_2$   $C_1$ - to  $C_{12}$ -alkylene;

X, Y  $(C_2H_4O_-)_x(C_3H_6O_-)_y$ -FR; x+y  $\exists 1, x: 0-15, y: 0-10$ ; and

FR -SO<sub>3</sub>M, -CH<sub>2</sub>-CO<sub>2</sub>M, -P(O)(OM)<sub>2</sub>, H, -C<sub>3</sub>H<sub>6</sub>SO<sub>3</sub>M, -CH<sub>2</sub>(CHOH)<sub>4</sub>CH<sub>2</sub>OH, insofar as x+y=0, wherein M = alkali, (alkyl)ammonium, alkanol ammonium, H, or ½ alkaline earth.

Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

15. (Withdrawn) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant has the general formula (A.II)

$$R \stackrel{\text{!}}{\longrightarrow} N \stackrel{\text{?}}{\longrightarrow} R^3$$
 (A.II),

wherein the substituents have the meanings as defined by the general formula (A.I).

16. (Withdrawn) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant has the general formula (A.III)

$$CO_2M$$
 $R^2$ 
 $R^3$ 
(A.III),

wherein the substituents have the meanings as defined by the general formula (A.I).

Appl. No.: 09/831,797 Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

17. (Withdrawn) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant has the general formula (B.I)

wherein the substituents have the following meanings:

R<sup>1</sup>, R<sup>3</sup> C<sub>5</sub>- to C<sub>25</sub>-alkyl group that can be branched, unbranched, saturated, or unsaturated as far as not adjacently diunsaturated;

 $R_2$   $C_1$ - to  $C_{12}$ -alkylene;

A CHR<sup>4</sup>, CH<sub>2</sub>, C<sub>2</sub>H<sub>4</sub>, C<sub>3</sub>H<sub>6</sub>, C<sub>4</sub>H<sub>8</sub>;

R<sup>4</sup> aminocarboxylic acid radical; and

M alkali, (alkyl)ammonium, alkanol ammonium, H, or ½ alkaline earth.

18. (Withdrawn) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant has the general formula (B.II)

wherein the substituents have the meanings as defined by the general formula (B.I) and

Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

R <sup>5</sup> , R <sup>6</sup>	represent C <sub>6</sub> - to C <sub>36</sub> -alkyl group that can be branched,
	unbranched, saturated, or unsaturated as far as not
	adjacently diunsaturated;
X	is an alkylene- or alkenylene group having from 1 to 6
	carbon atoms, which may be substituted with a hydroxyl
	group or a sulfonic acid group or a carboxy group;
$Y^1$	is a sulfonate group, a sulfate group, or a carboxyl group;
	and
Y <sup>2</sup>	represents a hydroxyl group, a sulfuric acid residue, or -O-
	(CO)X-COOH.

19. (Withdrawn) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant has the general formula (B.III)

$$O = \bigcap_{R^1}^{FG} \bigcap_{R^2 = N}^{FG} O$$
(B.III),

wherein the substituents have the meanings as defined by the general formula (B.I) and

FG represents -COOM or -SO<sub>3</sub>M.

Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

20. (Withdrawn) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant has the general formula (B.IV)

$$O = \begin{pmatrix} R^5 & R^6 \\ N & R^2 & N \\ AO)_{a}Z & (AO)_{a}Z \end{pmatrix}$$
(B.IV),

wherein the substituents have the meanings as defined by the general formulas (B.I) and (B.II), and

AO represents alkylene oxide units wherein n = 1 to 20; and

Z is  $-SO_3M$ ,  $-C_2H_4SO_3M$ ,  $-C_3H_6SO_3M$ ,  $-P(O)(OM)_2$ ,  $-CH_2-COOM$ , or  $-C_2H_4-COOM$ .

21. (Withdrawn) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant has the general formula (C.I),

$$R^{1}-B-R^{2}-N-R^{3}-Y$$
 $R^{1}-B-R^{2}-N-R^{3}-Y$ 
(C.I),

wherein the substituents have the following meanings:

- R<sup>1</sup> C<sub>5</sub>- to C<sub>25</sub>-alkyl group that can be branched, unbranched, saturated, or unsaturated as far as not adjacently diunsaturated, hydroxy-substituted, or perfluorinated;
- $R^2$   $C_{1}$  to  $C_{12}$  alkylene or hydroxy-substituted derivatives thereof;
- B an amide group, a carboxyl group, or a polyether group;

Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

 $R^5$   $C_1$ - to  $C_4$ - alkyl, hydroxy-substituted alkyl, or H;

 $R^6$   $C_2$ - to  $C_4$ - alkylene;

x a number from 1 to 20;

 $R^3$   $C_{1-}$  to  $C_{12}$ -alkyl, hydroxy-substituted derivatives thereof,  $R^7$ -D- $R^7$ , or a polyether group having the formula  $[-O(R^6-O)_x-]$  wherein x is from 1 to 30;

 $R^7$   $C_1$ - to  $C_6$ - alkylene or hydroxy-substituted derivatives thereof;

D -O-, -S-, -N( $\mathbb{R}^8$ )-;

R<sup>4</sup> alkylene, alkylaryl having from 1 to 12 carbon atoms, the hydroxy-substituted derivatives thereof, or R<sup>9</sup>-D<sup>1</sup>-R<sup>9</sup>;

R<sup>8</sup> C<sub>1</sub>- to C<sub>12</sub>-alkyl, hydroxy-substituted alkyl, H, or R<sup>9</sup>-D<sup>1</sup>-R<sup>9</sup>;

R<sup>9</sup> C<sub>1</sub>- to C<sub>6</sub>-alkylene, hydroxy-substituted derivatives thereof, or aryl;

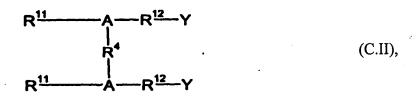
D<sup>1</sup> -O-, -S-, -SO<sub>2</sub>-, -C(O)-, [-O(R<sup>7</sup>-O)<sub>x</sub>-] wherein x is from 1 to 30,  $(R^{10})$ ,[N(R<sup>10</sup>)]<sub>z</sub>, or aryl;

 $R^{10}$   $C_{1}$ - to  $C_{12}$ -alkyl, hydroxy-substituted alkyl, H, or aryl;

t, z are independently a number from 1 to 4; and

Y is independently -SO<sub>3</sub>H, O-SO<sub>3</sub>H, -OP(O)(OH)<sub>2</sub>, -P(O)(OH)<sub>2</sub>, -COOH, -CO<sub>2</sub>-C<sub>6</sub>H<sub>4</sub>-SO<sub>3</sub>H, or the salts thereof.

22. (Withdrawn) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant has the general formula (C.II)



wherein the substituents have the meanings as defined by the general formula (C.I) and

Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

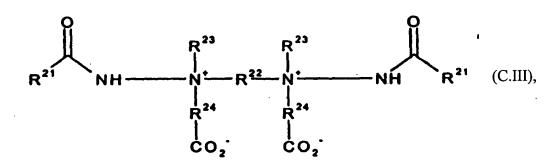
 $R^{11}$  is  $C_5$ - to  $C_{23}$ -alkyl group that can be branched, unbranched, saturated, or unsaturated as far as not adjacently diunsaturated, hydroxy-substituted, perfluorinated, or  $R^{14}$ - B- $R^2$ ;

 $R^{14}$  is  $C_{1-}$  to  $C_{12}$ -alkyl group that can be branched, unbranched, saturated, unsaturated as far as not adjacently diunsaturated, or the hydroxy-substituted derivatives thereof;

means C<sub>1</sub>- to C<sub>12</sub>-alkylene group that can be branched, unbranched, saturated, unsaturated as far as not adjacently diunsaturated, the hydroxy-substituted derivatives, an amide group, a carboxyl group, a polyether group, or R<sup>9</sup>-D<sup>1</sup>-R<sup>9</sup>; and

A is  $-CR^6$  or -N=, if whenever A is equal to -N=,  $R^{11}$  represents  $R^{14}$ -B- $R^2$ .

23. (Withdrawn) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant has the general formula (C.III)



wherein the substituents have the meanings as defined by the general formulas (C.I) and (C.II) and

 $R^{21}$  represents  $C_5$ - to  $C_{23}$ -alkyl, branched, unbranched, saturated, or unsaturated as far as not adjacently diunsaturated;

Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

 $R^{22}$ ,  $R^{24}$  are  $C_1$ - to  $C_6$ -alkylene and is methyl, ethyl, propyl, or a polyether group.

24. (Withdrawn) A surfactant composition according to one of claims 1 or 2, characterized in that the gemini surfactant has the general formula (D.I)

wherein the substituents have the following meanings:

- R, R<sup>1</sup> C<sub>5</sub>- to C<sub>30</sub>-alkyl, branched or unbranched, saturated, optionally unsaturated as far as not adjacently diunsaturated, hydroxy-substituted or perfluorinated;
- $R^2$   $C_{1}$  to  $C_{10}$ -alkylene, arylene, or the hydroxy-substituted derivatives thereof, a polyether [-O( $R^4O$ )<sub>x</sub>-], -S-, -SO<sub>2</sub>-, -0-, -S-S-, -O- $R^5$ -O-, or -S- $R^5$ -S-; variable for a direct bond between the two  $\alpha$ -carbons;
- R<sup>4</sup> C<sub>2</sub>- to C<sub>4</sub>-alkylene;
- $R^5$   $C_{1}$  to  $C_{10}$ -alkylene, arylene, or alkyl arylene, -N( $R^6$ )-, or -(NR $^6$ )-,  $R^7$ -(NR $^6$ )-;
- $R^6$   $C_1$  to  $C_6$ -alkyl;
- R<sup>7</sup> C<sub>1</sub>- to C<sub>6</sub>-alkyl, wherein R<sup>7</sup> and R<sup>6</sup> can also be part of a heterocyclic ring;
- X polyether having the formula  $[-O(R^4O)_{x^-}]$ , wherein x is a number from 1 to 30, -O-, NZ;

Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

Z  $C_1$ - to  $C_{10}$ -alkyl, aryl, alkylaryl, or H, and

- Y, Y<sup>1</sup> are independently H, -CH<sub>2</sub>-C00H and salts, a hydrocarbon radical having at least two hydroxyl groups.
- 25. (Withdrawn) A surfactant composition according to one of claims 1 or 2, characterized in that the gemini surfactant has the general formula (D.II)

$$R - CH - AO - T$$

$$R^{2}$$

$$R - CH - AO - T^{1}$$
(D.II),

wherein the substituents have the meanings as defined by the general formula (D.I) and

AO means -C(O)-, -C(O)-  $[-O(R^4O)_x$ -),  $-CH_2$ - $[-O(R^4O)_x$ -],  $-CH_2$ -O-;

T,  $T^1$  are independently -OM, -H, -CH<sub>3</sub>, -C<sub>2</sub>H<sub>5</sub>, -SO<sub>3</sub>M, -CH<sub>2</sub>COOM, -C<sub>2</sub>H<sub>4</sub>-COOM, -C<sub>3</sub>H<sub>6</sub>-SO<sub>3</sub>M, -O-P(O)(OM)<sub>2</sub> and

M is alkali, ½ alkaline earth, ammonium, mono-, di-, trialkanolammonium, or H.

26. (Withdrawn) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant has the general formula (D.III)

Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

wherein the substituents have the meanings as defined by the general formulas (D.I) and (D.II), and

 $R^8$  represents NYY<sup>1</sup>,  $-O(R^4O)_xH$  or  $-O(R^4O)_x-C(O)$ -CHR-CHR<sup>1</sup>-C(O)NYY<sup>1</sup>.

27. (Withdrawn) A surfactant composition according to any of claims 1 or 2, characterized in that the gemini surfactant has the general formula (D.IV)

wherein the substituents have the meanings as defined by the general formula (D.I), (D.II), and (D.III), and

t is an integer from 1 to 100

## 28-32 (Cancelled)

- 32. (Original) A surfactant composition according to any of claims 1 or 2, characterized in that the surfactant composition comprises a gemini surfactant of the general formula (DI) as component (A) and acyllactylates, acylglutamates, alkyl isethionates, and mixtures thereof as component (B).
- 33. (Original) The surfactant composition of claim 8 wherein the oligomerization degree of the lactic acid is in the range of from 1.1 to 4.

Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

- 34. (Original) The surfactant composition of any of claims 1 or 2 wherein said gemini surfactant comprises a hydrophillic double (head) group comprising at least one alkoxylated residue bearing a group selected from sulfonic acid, carboxylic acid, phosphonic acid, polyalcohol, polyalkylene-oxide group, salts thereof, and mixtures thereof.
- 35. (Original) The surfactant composition of any of claims 1 or 11 wherein said gemini surfactant comprises a hydrophillic double (head) group comprising at least one alkoxylated residue bearing a group selected from sulfonic acid, carboxylic acid, phosphonic acid, polyalcohol, polyalkylene-oxide group, salts thereof, and mixtures thereof.
- 36. (Currently

  Amended) The surfactant composition of claim 12 wherein said anionic ionic surfactant are anionic surfactants.
- 37. (Original) The surfactant composition of claim 13 wherein the components (A) and (B) are present in the whole composition in the total amount of from 0.1 to 10 wt%.
- 38. (Withdrawn) The surfactant composition of claim 20 wherein said alkylene oxide units comprise a single alkylene oxide species.
- 39. (Withdrawn) The surfactant composition of claim 20 wherein said alkylene oxide units comprise mixed species.
- 40. (Withdrawn) The surfactant composition of claim 39 wherein said alkylene oxide units are randomly arranged.

Amendment Dated: 9/1/2006

Reply to Office Action dated October 5, 2004

- 41. (Withdrawn) The surfactant composition of claim 39 wherein said alkylene oxide units are in block form.
- 42. (Withdrawn) The surfactant composition of claim 24 wherein said hydrocarbon radical having at least two hydroxyl groups is selected from the class consisting of erythrose, threose, ribose, arabinose, xylose, fructose, lyxose, allose, altrose, glucose, mannose, galactose, and mixtures thereof.
- 43. (Withdrawn) The surfactant composition of claim 27 wherein t is from 1 to 20.
- 44. (Withdrawn) The surfactant composition of claim 43 wherein t is from 1 to 4.